

IN THE CLAIMS

The following is a complete listing of the claims, which replaces all previous versions and listings of the claims.

1-47. (canceled)

48. (previously presented) A modular power converter comprising:

a converter including a support including a passage for circulation of a cooling medium and a power electronic switching circuit mounted on the support and configured to convert input power to output power having desired electrical characteristics;

a housing at least partially surrounding the converter; and

at least one plug-in connector coupled to the switching circuit and to the housing for establishing electrical continuity between the converter and external circuitry.

49. (currently amended) The converter of claim 48, wherein the housing shields the switching circuit from EMI, and wherein the at least one plug-in connector extends EMI shielding from the housing to a region at least partially surrounding conductors of the at least one plug-in connector.

50. (currently amended) The converter of claim 48, wherein the at least one plug-in connector includes a single connector having electrical connections for the input power and the output power.

51. (currently amended) The converter of claim 48, comprising a connection interface coupled to an exterior surface of the housing and including the at least one plug-in

connector, wherein the connection interface ~~at least one connector~~ includes connections for incoming and outgoing cooling fluid.

52-55. (canceled)

56. (previously presented) The converter of claim 48, further comprising a fluid connector for routing the cooling medium to and from the converter.

57. (canceled)

58. (currently amended) A modular power converter comprising:

a converter including a support including a passage for circulation of a cooling medium and a power electronic switching circuit mounted on the support and configured to convert input power to output power having desired electrical characteristics;

a housing at least partially surrounding the converter and configured to provide integral EMI shielding and at least partially defining an electrical reference plane for the converter; and

at least one plug-in connector coupled to the switching circuit and to the housing for establishing electrical continuity between the converter and external circuitry and for extending EMI shielding from the housing to a region at least partially surrounding conductors of the at least one plug-in connector.

59. (currently amended) The converter of claim 58, wherein the housing and the at least one plug-in connector are configured to provide contiguous shielding having

intrinsically low impedance paths for EMI originating from the switching circuit and from sources external to the converter during operation.

60. (currently amended) The converter of claim 58, wherein the at least one plug-in connector includes a single connector having electrical connections for the input power and the output power.

61. (currently amended) The converter of claim 58, comprising a connection interface coupled to an exterior surface of the housing and including the at least one plug-in connector, wherein the connection interface ~~at least one connector~~ includes connections for incoming and outgoing cooling fluid.

62-65. (canceled)

66. (previously presented) The converter of claim 58, further comprising a fluid connector for routing the cooling medium to and from the converter.

67. (canceled)

68. (previously presented) A modular power converter comprising:

a converter including a support including a passage for circulation of a cooling medium and a power electronic switching circuit mounted on the support and configured to convert input power to output power having desired electrical characteristics;

a housing at least partially surrounding the converter and configured to provide integral EMI shielding and at least partially defining an electrical reference plane for the converter;

at least one plug-in connector coupled to the switching circuit and to the housing;
and

a connector plug adapted to interface with the at least one plug-in connector for establishing electrical continuity between the converter and external circuitry;

wherein the at least one plug-in connector and the connector plug mate to extend EMI shielding from the housing to the connector plug.

69. (currently amended) The converter of claim 68, wherein the housing, the at least one plug-in connector and the connector plug are configured to provide contiguous shielding having intrinsically low impedance paths for EMI originating from the switching circuit and from sources external to the converter during operation.

70. (currently amended) The converter of claim 68, wherein the at least one plug-in connector includes a single connector having electrical connections for the input power and the output power.

71. (currently amended) The converter of claim 68, comprising a connection interface coupled to an exterior surface of the housing and including the at least one plug-in connector, wherein the connection interface ~~at least one connector~~ includes connections for incoming and outgoing cooling fluid.

72-75. (canceled)

76. (previously presented) The converter of claim 68, further comprising a fluid connector for routing the cooling medium to and from the converter.

77. (canceled)

78. (new) The converter of claim 48, wherein the at least one plug-in connector comprises:

a plurality of conductors coupled to the switching circuit, the plurality of conductors including external portions of the conductors that extend outwardly from an exterior surface of the housing; and

a peripheral wall extending outwardly from the exterior surface of the housing and at least partially surrounding the plurality of conductors in such a manner that the peripheral wall provides EMI shielding to portions of the plurality of conductors outside of the housing.

79. (new) The converter of claim 58, wherein the at least one plug-in connector includes a peripheral flange extending from the housing and at least partially surrounding portions of the conductors located outside the housing, and the peripheral flange is configured to provide EMI shielding to the portions of the conductors located outside the housing.